AMENDMENTS TO THE CLAIMS

1. (Currently amended) A Moineau stator, comprising:

a thick-walled tube (10) having a thickness such that the stator structure is able to resist pressure, torque, and axial loads experienced in its intended operating environment, lobes (3) arranged in a configuration which is adapted to interact with [[a]] the rotor and formed through a hydroforming process.

2. (Currently amended) The Moineau stator as defined in Claim 1, wherein the tube (10) has an elastomer coated interior (4) adapted to form a liquid seal with [[a]] the rotor.

3. (Original) The Moineau stator as defined in Claim 2, wherein the elastomer (4) is of uniform thickness.

4-7. (Canceled)

8. (Currently amended) The Moineau stator as defined in Claim [[5]] 19, wherein one of an exterior surface (6) of the tube (10) or an interior surface of the support housing (301) is coated with elastomer (302).

9. (Canceled)

10. (Currently amended) ~~The Moineau stator as defined in Claim 9, wherein the means to equalize pressure includes fluid passages (206)~~ A Moineau stator, comprising:

a tube (10) having lobes (3) arranged in a configuration which is adapted to interact with a rotor, the tube (10) is thin-walled with walls (2) that are sufficiently thin as to be subjected to elastic deformation in response to interfacial seal forces imposed by interference with the rotor and is surrounded by a supporting structure (201) in the form of a support housing having walls able to

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resist pressure, torque, and axial loads experienced in its intended operating environment, discrete pressurized axial cavities (203) are positioned in an annulus (202) between the tube (10) and the support housing (201) and fluid passages (206) are provided to equalize pressure in the axial cavities (203) with pressure within the interior (5) of the tube (10) by allowing fluids from the interior (5) of the tube (10) to communicate with the axial cavities (203).

11. (Original) The Moineau stator as defined in Claim 2, wherein there is an unequal preferential axial distribution of elastomer coating (4) at intervals along the length of the tube (10).

12. (Currently amended) The Moineau stator as defined in Claim 2, wherein there is an unequal preferential circumferential distribution of elastomer coating (4) at intervals along the interior circumference of the tube (10).

13. (Currently amended) The Moineau stator as defined in Claim 1, wherein the tube (10) is placed into a hydroforming fixture (100) and formed to have lobes (3), arranged in a configuration which is adapted to interact with [[a]] the rotor, through a hydroforming process.

14-18. (Canceled)

19. (Currently amended) The Moineau stator as defined in Claim [[14]] 10, wherein the support housing (301) has lobes arranged in a configuration adapted to interact with the lobes on the tube (10) to form said discrete pressurized axial cavities, thereby balancing pressure acting on the interior surface (6) of the tube (10) with a substantially equal pressure acting on the exterior surface (6) of the tube (10) such that the deformation of the tube (10) in response to pressure variations is limited.

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